IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: M. MICHAEL PITTS, JR., and RODRIGO F.V. ROMO

DOCKET NO.: 111732.00012

SERIAL NO.: EXAMINER:

FILED: ART UNIT:

TITLE: CAPACITIVE ELECTROSTATIC PROCESS FOR INHIBITING THE FORMATION OF BIOFILM DEPOSITS IN MEMBRANE-SEPARATION SYSTEMS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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INFORMATION DISCLOSURE STATEMENT

Dear Sir:

In keeping with the duty of candor and good faith owed to the Patent and Trademark Office, applicant wishes to make of record the items on attached PTO Form 1449. Pursuant to 37 CFR 1.98(d), copies of the U.S. and non-patent documents listed in Form 1449 are not submitted herewith because previously cited by and/or submitted to the Office during prosecution of U.S. Serial Nos. 10/047,493 and 09/416,255, the priorities of which are being claimed for this application.

Applicants believe that none of the referenced material, alone or in combination, anticipates or renders obvious their invention, as claimed in the attached continuation application. The publication WO 99/50186 is submitted because believed to be relevant to the anti-corrosion and reverse-osmosis claims in the parent application, but it is not believed to anticipate or render obvious the claims related to biofilm formation.

Respectfully submitted,

Antonio R. Durando
Reg. No. 28,409

Date: 3/9/04

FORM PTO-1449	THE UNITED STATES PATENT AND TRADEMARK OFFICE	
LIST OF PRIOR ART Cited by Applicants as Relevant to Invention entitled: CAPACITIVE ELECTROSTATIC PROCESS FOR INHIBITING THE FORMATION OF BIOFILM DEPOSITS IN MEMBRANE-SEPARATION SYSTEMS	ATTY. DOCKET NO. 111732.00012	SERIAL NO.
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	FILING DATE	GROUP

U.S.PATENT DOCUMENTS

EXAMINERS INITIALS			DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
			3,936,036	01/20/1976	HARMS	204	152	12/73
			4,020,474	05/17/1977	CLARK ET AL.	204	302	01/76
			4,238,326	12/09/1980	WOLF	210	695	09/79
			4,278,548	07/14/1981	BETTINGER ET AL.	210	636	08/79
			4,755,305	07/05/1988	FREMONT ET AL.	210	748	04/86
			4,802,991	02/07/1989	MILLER	210	705	10/84
			4,886,593	12/12/1989	GIBBS	204	302	02/89
			4,902,390	02/20/1990	ARNESEN	204	149	03/88
			4,915,846	04/10/1990	THOMAS, JR. ET AL	210	702	03/89
			5,022,491	06/11/1991	THOMPSON ET AL.	134	102	04/87
			5,114,567	05/19/1992	DITZIER ET AL.	210	195.1	10/90
			5,128,043	07/07/1992	WILDERMUTH	210	695	02/91
			5,326,464	07/05/1994	BINGER	204	305	07/92
			5,595,177	01/07/1997	PITT, JR.	204	667	02/94
			5,804,390	09/15/1998	AKATSU ET AL.	134	32	09/97
			5,817,224	10/06/1998	PITTS, JR.	204	571	01/97
			5,937,270	08/03/1999	MOHINDRA ET AL.	134	21	01/98
			6,180,056	01/30/2001	MCNEEL ET AL.	422	15	12/98

FOREIGN PATENT DOCUMENTS

			DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TNSLTN YES	TNSLTN NO
			WO 99/50186	10/07/1999	PCT				
			DE 198 06 796 A1	02/19/1998	Germany				
			1-245868	02/10/1989	Japan				
			2-298397	10/12/1990	Japan				

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	APPLICANTS: M. MICHAEL PITTS, JR., et al.	
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			OTHER PRIOR ART (including Author, Title, Date, Pertinent, Etc.)
			A.J. Sale, "Effects of High Electric Fields on Microorganisms," Biochimica et Biophysica ACTA 781-788 (1967)
			R.W. Glaser, "Reversible Electrical Breakdown of Lipid Bilayers: Formation and Evolution of Pores," Biochimica et Biophysica ACTA 275-286 (1988)
			C.P. Davis, "Effects of Microamperage, Medium, and Bacterial Concentration on Iontophoretic Killing of Bacteria in Fluid," Antimicrobial Agents and Chemotherapy 442-447 (1989)
			C.P. Davis, "Bacterial and Fungal Killing by Iontophoresis with Long-Lived Electrodes," Antimicrobial Agents and Chemotherapy 2131-2134 (1991)
			S.A. Blenkinsopp, "Electrical Enhancement of Biocide Efficacy Against Pseudomonas Aeruginosa Biofilms." Applied and Environmental Microbiology 3770-3773 (1992)
			C.P. Davis, "Quantification, Qualification, and Microbial Killing Efficiencies of Antimicrobial Chlorine-Based Substances," Antimicrobial Agents and Chemotherapy 2768-2774 (1994)
			J. Jass, "The Effect of Electrical Currents and Tobramycin on Pseudomonas Aeruginosa Biofilms," Journal of Industrial Microbiology 234-242 (1995)
			N. Wellman, "Bacterial Biofilms and the Bioelectric Effect," Antimicrobial Agents and Chemotherapy 2012-2014 (1996)
			J. Jass, "The Efficacy of Antibiotics Enhanced by Electrical Currents Against Pseudomonas Aeruginosa Biofilms," Journal of Antimicrobial Chemotherapy 987-1000 (1996)

EXAMINER	DATE CONSIDERED

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.